

TRANSPORTATION DISTRIBUTION & LOGISTICS CAREER CLUSTER
Basic Maintenance & Repair
Fall 2017-Spring 2018

Mr. Johnson
Chattahoochee HS – Rooms CT2 (Auto Lab) & CT3 (Classroom)
johnsonk7@fultonschools.org
470-254-7600

Hours for concerns, conferences, or remediation: M-F 7:40 am-8:20 am

Textbook/workbook: Duffy, James (2006) *Modern Automotive Technology*. Tinley Park, Illinois.
Goodheart- Willcox. Cost for replacement \$ 90.00

Materials provided by the Instructor:

- Textbook (If damaged, student will be responsible for the cost of the book)
- Classroom Computers (If damaged, student will be responsible for the cost of the damage)
- Protective clothing and gear (for lab activities- If damaged, student will be responsible for the cost of the gear)

Materials provided by the student:

- Students are required to bring a notebook and pen (or school issued tablet) to class each day.

Transportation Distribution & Logistics Career Cluster:

The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance. ***Certifications are available at the completion of the pathway.***

Course Description:

This course is designed to give a foundational understanding of Automobile Maintenance and Light Repair. Students in this course will learn the basic skills needed to gain employment as a maintenance and light repair technician. Students will be exposed to courses in automotive preventative maintenance and servicing and replacing brakes, and steering and suspension components. In addition, student will learn how to do general electrical system diagnosis, learn electrical theory, perform basic tests and determine necessary action. In addition, students will learn how to evacuate and recharge air-conditioning systems using the proper refrigerant. The hours completed in this course are aligned with ASE/NATEF standards and are the foundation for the entry-level technician. The pre-requisite for this course is advisor approval. There are 3 levels of BMLR in order to complete the pathway

Course Objectives-upon completion of this course, the student will:

1. Demonstrate an understanding of SkillsUSA and CTSOs
2. Identify and properly use tools and equipment.
3. Use proper repair procedures as outlined in technical manuals.
4. Maintain safety health and environmental standards.
5. Demonstrate and understand proper work ethic and professionalism.
6. Be able to perform and apply math by using mental, manual and electronic methods.
7. Communicate thoughts and information accurately in writing.
8. Demonstrate the ability to accurately understand and interpret written information.
9. Create, combine and connect ideas and information.
10. Receive, comprehend, interpret and respond to verbal messages
11. Present thoughts and messages to listeners orally and visually.
12. Be able to demonstrate preventive maintenance practices.
13. Be able to describe the major automotive systems.
14. Be able to perform basic electrical tests.
15. Be able to demonstrate how to properly perform basic brake repairs.
16. Be able to demonstrate how to properly perform basic suspension & steering repairs.
17. Be able to demonstrate how to properly perform basic engine performance test.

Course Format and Expectations:

This course consists of relevant lectures, rigorous classroom discussion, presentations, group work, automotive lab work, writing and peer teaching. Students registered in this class are expected to contribute to discussions and participate in

hands-on automotive lab activities. Students will also explore and present ideas orally, as well as in written format. Students will complete individual & group assignments on-time and participate as peer teachers and in all classroom and lab activities. *****Please be fully aware that when the bell rings to begin class, you will be expected to be in the classroom and ready for class to begin. Since attendance is taken immediately at the beginning of class.*****

DAILY EXPECTATIONS:

1. Be present-contribute to discussions, participate in course activities, use class time efficiently
2. Be on-time, prepared, engage and persist in learning experiences
3. Complete all lab and class work with 100% effort and focus on self-evaluation and improvement.
4. Respect all people and equipment in the classroom
5. Do your part to ensure the class runs smoothly-be careful not to distract other students
6. Clean up after yourself, cheerfully, and without reminders

****PLEASE ALSO SEE CLASSROOM GUIDELINES ATTACHED****

Live Automotive Lab:

Here at Hooch, we operate a live auto repair lab every Thursday & Friday by appointment (Hooch Automotive Shop). *****Students perform the repair work on vehicles.***** During live automotive lab time our students have the opportunity to listen to a customer complaint, collaborate with their peers to decide the best course of action and diagnosis, then in their assigned lab team, repair the problem. All have delegated positions within the lab, are expected to participate fully, and are graded accordingly. The scheduled vehicles are from sources such as Teachers and staff, students and relatives, as well as local community. Appointments are made through the Instructor and/or his teaching assistant.

DISCLAIMER FOR SERVICE: The owner of any vehicle brought to the automotive shop, assumes ALL and ANY risks and costs associated with damages that may occur while at the automotive shop and while on FCS property.

SAFETY POLICY: Due to the possible dangers associated within the automotive shop, specific automotive lab rules will be followed, in addition to the rules found in the Chattahoochee student handbook. These additional rules will be covered in detail during the shop safety lessons at the beginning of the semester. All students must wear the appropriate clothing and safety glasses to be able to work in the shop area. All students must pass the safety performance test with score of 100 % to enter lab. The equipment in the lab is REAL AUTOMOTIVE EQUIPMENT and there are dangers associated with the machinery and equipment if not used properly and safely.

Shop Activities: Shop activities shall include but are not limited to the following;

Locating vehicle information – decoding vehicle identification number – identifying power-train configurations – identifying chassis configurations - using a shop manual – using an owners manual – using a repair manual – using computerized service information – using a parts manual – using a labor guide – recording service procedures – checking and changing engine oil and filter – checking and adjusting power train fluids – checking and changing transmission/ transaxle fluids and filters – checking and adjusting differential fluids – checking and adjusting coolant levels – checking and adjusting brake fluid – checking and adjusting power steering fluid – checking and adjusting windshield washer fluid –inspecting and adjusting engine drive belts – servicing air conditioning systems, inspecting vehicle safety features – checking exterior lighting – checking and replacing windshield wiper blades – checking and adjusting tire pressures – checking tire wear patterns- new car pre delivery inspection- lubrication service of wear points- cleaning and care of vehicle.

Professionalism/Leadership/Employability

In Career & Technical Education (CTE) Programs, job related skills and attributes are observed and become a factor in the student's grade as a reflection of criteria surrounding future employability. As such those factors include attendance & punctuality, pride in their work, time management, honoring class policy concerning the use (or restrictions on the use) of electronic & personal devices, ability to remain focused on the task assigned, ability to work independently or as a team member and/or team leader when the situation is warranted. Demonstrating initiative and recognizing and just doing what needs to be done, communicating well orally and in writing, and dressing appropriately, including safety apparel when required are also observed criteria.

Tentative Sequence & Scope for BMLR - (3) 6 WK UNITS OF STUDY MAKE UP THE SEMESTER. There are 2 semesters- Fall and Spring for a total of 26 Weeks:

- Week 1. Employability
- Week 2. Safety Procedures
- Week 3. Tools and Equipment
- Week 4. Vehicle Service Information
- Week 5-7. General Engine Service
- Week 8-10. Transmissions

Week 10-12. Suspension and Steering Systems
 Week 13-15. Brake Systems
 Week 16-18. Electrical Systems
 Week 19. Air Conditioning Systems
 Week 20-24. Engine Performance
 Week 25. Careers in Automotive
 Week 26. SkillsUSA

Major Projects:

- *Potato Batteries
- *Engine Removal/Rebuild
- *Alignment Angles
- *Who Killed the Electric Car Project
- *4-stroke vs. 2-stroke Engines
- *Electrical Circuit Board Build
- *SkillsUSA Projects

Course Standards:

- TDL-BMLR-1 Demonstrate employability skills required by business and industry.
- TDL-BMLR-2 Identify and use safety procedures and proper tools.
- TDL-BMLR-3 Identify and utilize proper tools and equipment tools and equipment.
- TDL-BMLR-4 Identify and utilize vehicle service information.
- TDL-BMLR-5 Demonstrate general engine service techniques.
- TDL-BMLR-6 Perform general automatic transmission & manual transaxle & differential service.
- TDL-BMLR-7 Prepare vehicle for general suspension and steering systems service.
- TDL-BMLR-8 Perform hydraulic brake system service and repairs.
- TDL-BMLR-9 Perform general electrical systems service.
- TDL-BMLR-10 Demonstrate knowledge of air conditioning systems.
- TDL-BMLR-11 Analyze engine performance.
- TDL-BMLR-12 Develop an understanding of automotive careers, describing the principal fields of specializations and identifying associated career opportunities.
- TDL-BMLR-13 Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events.

EVALUATION/ASSESSMENT:

	D Range			C Range			B Range			A Range			
Totaled Percentage:	<59%	60%	65%	69%	70%	75%	79%	80%	85%	89%	90%	95%	100%
Course Grade:	F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A	A+

Course grade explanations

- A: Excellent
 Demonstration of superior work in the fulfillment of the course requirements
- B: Good
 Work that exceeds expectations in the fulfillment of the course requirements
- C: Satisfactory
 Work that meets the course requirements
- D: Passing, but less than satisfactory
 Assigned work is not satisfactory or not completed
- F: Failing
 Failure to meet minimum course goals—art experience assignments, written assignments, class participation, and other course requirements

Grade Distribution:

Your grade will reflect the overall quality, thoroughness and dedication you have put forth in each part of the course listed below. Your grade will be determined as follows:

(a) Classroom Projects and Lab Participation	50% of your final grade
(b) Practical Application of Knowledge (Lab Quiz)	20% of your final grade
(c) Lab Notes and Handout Notebook	10% of your final grade
(d) Final Exam	20% of your final grade

CHS PLAGIARISM STATEMENT:

A particular kind of honor code violation occurs with plagiarism. Plagiarism is defined as the use of another's words, ideas, or artwork and the presentation of them as though they are entirely one's own. Acts of plagiarism include but are not limited to using words, artwork or ideas from a published source (including the Internet) without proper documentation; using the work of another student (e.g., copying another student's homework, composition); using excessive editing suggestions of another student, teacher, parent, or paid editor. Plagiarism on any project or paper at Chattahoochee High School will result in a zero for the assignment and an Honor Code Violation. Unless directly stipulated by the teacher, collaboration on written work is not acceptable. Students who willingly provide other students with access to their work are in violation of the Chattahoochee High School Honor Code.

TARDY POLICY

Once the tardy bell rings **AND YOU ARE NOT IN THE CLASSROOM, SIGN IN ON THE TARDY SHEET. EVEN IF YOU ARE 30 SECONDS LATE.**

- **1ST/2ND TARDY = WARNING**
- **3RD TARDY = PARENT CONTACT**
- **4TH TARDY = PRIVATE DETENTION + PARENT CONTACT**
- **5TH TARDY = REFERRAL TO ASSISTANT PRINCIPAL FOR INSUBORDINATION**

Please see the Tardy Policy in your Student Handbook.

End of class: Students must have their hands clean, the lab area clean, and all equipment returned to the proper storage area before the bell rings at the end of the class period.

ABSENCES AND MAKE-UP WORK:

Students are responsible for ALL information covered in class. If absent, the student should:

1. Check the **ONLINE** daily class blog on edmodo and if you have questions **ASK THREE RELIABLE CLASSMATES FIRST, THEN YOU MAY ASK ME IF YOU STILL HAVE QUESTIONS.**
2. Handouts/Notes Outlines/PPTs can be found on the **ONLINE** daily class blog on edmodo
3. Talk with the instructor, before school starts, after class, or during your lunch break about making up work - **NOT AT THE BEGINNING OF CLASS.**

Fulton County School Board Policy IHA Grading and Reporting System Provision for Improving Grades

1. Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance. Students should contact the teacher concerning recovery opportunities. Teachers are expected to establish a reasonable time period for recovery work to be completed during the semester. All recovery work must be directly related to course objectives and must be completed ten school days prior to the end of the semester.
2. Teachers will determine when and how students with extenuating circumstances may improve their grades.

CTAE Department Provision for Grade Improvement Policy

Students who have received a grade below 75% on a major test/project have the opportunity to recover their grade through the Grade Improvement process.

- The maximum grade that can be earned is 75%.
- Students must initiate the recovery process.
- Once notified of the low grade, students have up to 10 days to initiate and complete the recovery work.
- The individual teacher will determine the means of recovery.
- Students can have no more than 5 unexcused absences from the class.
- All missing work/zeros must be made up before the recovery process can begin.

Late/Missing Work

- Work that is turned in after the deadline will receive a maximum grade of 75%.
- Work that is missing will receive an NHI (not handed in).
- If the missing work is not submitted within 10 days from the initial deadline, the NHI will be changed to a zero permanently.

Equipment:

Some equipment may be checked out to you. You are responsible for equipment care. Lost or damaged equipment must be paid for at the end of the semester.

Parking: Student vehicles should never be parked near the auto shop bay doors without permission.

Internet Policy: Students should only use the computers and Internet during approved times and for the sole purpose of school/course related activities. **Students should not look at anything on the Internet that DOES NOT pertain to the classroom activity/project or instruction being given by Mr. Johnson.**

CTAE END-OF-PATHWAY ASSESSMENT (EOPA): The Georgia Department of Education has made available an End-of-Pathway Assessment to ascertain the competence of our career technology students. The End-of-Pathway Assessment measures the level of technical skill attainment of each career pathway completer. The End-of-Pathway Assessment will be administered in April and students that pass the test will receive an industry-recognized certification. Seniors who pass the test will receive a special CTE cord to wear at graduation.

CTAE STUDENT ORGANIZATIONS (CTSO): The CTAE department works with 8 CTSOs to enrich the curriculum in the CTAE Pathways. Many of these organizations are state chapters of national organizations that, with the aid of multiple corporate sponsors, have succeeded in developing effective programs to instruct and challenge students.

Georgia SkillsUSA members participate in local, state, and national activities provided through trade and industrial, technical, and health occupations courses and programs. The mission of SkillsUSA is to develop leadership skills and workplace competencies that students will need to succeed in a constantly changing global workplace. There are over 70 competitions available at both the regional and state levels, culminating with the SkillsUSA Championships in Kansas City, Missouri in June. Student dues for Georgia are \$15 and the membership deadline is in November. You can find more information at skillsusageorgia.org.

REVIEW THE GUIDELINES BELOW, SIGN AND RETURN TO THE INSTRUCTOR

Automotive Classroom Guidelines

Respect

- Each Other
- Tools/Equipment
- People's Property
- Adults/Authority Figures

Work

- Bell to Bell Instruction
- Participate in ALL Learning Activities
- Focus ALL Energy on Engaging in Learning

Grow

- Ability to communicate professionally
- Ability to make connections
- Ability to reach mastery in basic maintenance and repair skills

COACH JOHNSON'S CLASSROOM GUIDELINES

* RESPECT *

-Each Other: Students should behave in a school appropriate and professional manner that is conducive to learning at all times. This means they should avoid horseplay, teasing, rough housing, and aggressive behaviors. Students should not distract others from learning.

-Tools/Equipment: Students should use tools or equipment properly and only in the manner they are instructed to use them. This includes the computer equipment in the classroom. Any damage to tools, equipment or computer equipment will result in the student being financially responsible for fixing the damage. Additionally, students should not bring food or drink into the automotive classroom, around the computer equipment or in the automotive lab. All tools should be cared for and cleaned appropriately and then stored correctly for the next classes use.

-People's Property: Students should respect the vehicles brought into the auto lab. This means they should not lean against any vehicle in the shop, "write" in the dust on the surface of the paint on any vehicle in the shop, remove, steal, and/or disturb any item in a "customer's" vehicle. Theft will result in a report to the school police officer and may result in criminal action. Damage to vehicles will result in the student being financially **responsible** for fixing the damage.

- Adults/Authority Figures: Students should treat Paraprofessionals and Substitute Teachers with the same respect as they treat the instructor. Their behavior, communication, and actions should be school appropriate,

professional and not distract others from learning. Students who are reported as causing a disruption or who treat adults and authority figures in a disrespectful manner will be given a detention and your parent will be contacted. Continued negative behaviors will result in a report to the supervising assistant principal and may result in accelerated disciplinary actions. Disruptive behaviors include but are not limited to talking while an instructor or adult is talking, Students need to be listening attentively to instructions to ensure their safety and the proper use of tools, materials, etc. in the shop. Students may not swear, use derogatory terms, or discuss inappropriate subjects (Inappropriate is defined at the Instructor's discretion), leaving class early or without permission, asking to use the restroom but going to an unauthorized location instead, arguing with others, causing a disruption so that impedes another student's ability to learn.

*** WORK ***

-Bell to Bell Instruction: Students should come in the class and begin the task that is written on the white board. Class begins the second the bell rings. Attendance is taken at the start of class, while students are working on the bell-ringer task that is written on the board. Students should be in their seats, working on their individual task quietly while roll is taken. Cell phones are NOT permitted unless otherwise indicated by the instructor. Cell phones should be on silent and kept in the student's pocket or backpack. Students should NOT stand idly at the door near the end of class. At the end of Class students should be working quietly on the exit ticket task that is written on the board.

-Participate in ALL Learning Activities: Students are required to participate in the auto lab activities, as well as classroom activities. These include activities left for the paraprofessional or substitute teacher. Those activities are NOT OPTIONAL. All activities are designed to help you reach mastery in each of state course standards for automotive. Students may not sit and talk to their friends and do "NOTHING" or work on homework for another class. Students have PLENTY to do in this course and ALWAYS have several options for what they can be working on.

-Focus ALL Energy on Engaging in Learning: Students should focus on learning during the course time. Excess requests to go to the bathroom and excessive time spent doing so are not conducive to productive class time. Students should make EVERY effort to go to the bathroom between classes. However exceptions and emergencies do arise, so Students are allowed to go to the restroom, get a drink of water, or go to the vending machines 2 TIMES per week. The student must ask permission first, sign the restroom sheet and take the pass to the restroom. One student may go at a time. Students should not LOITER (Stand around idly or without apparent purpose), visit other students or classrooms (especially the art classroom or art students working in the hallway). Students should not be gone longer than 4-5 minutes. ***If abused this privilege will be discontinued and infractions may result in detention.*

*** GROW ***

-Ability to Communicate Professionally: Students will practice professional communication skills. These skills include communicating effectively through writing, speaking, listening, reading, and interpersonal abilities. Students will engage in learning that supports person-to-person etiquette, Cell phone and Internet etiquette, phone and email etiquette, professional work communication and listening. Additionally, students will engage in learning how to professionally communicate nonverbally, utilize effective written communication, professional speaking and how to apply for jobs in the automotive industry.

-Ability to Make Connections: Students need the opportunity to make valuable connections between themselves, education, and the world of work. In this course, students are provided the knowledge, tools, and resources to develop an understanding self and one's relationship to others; Students are provided the knowledge, tools, and resources to reach their education and career goals in a diverse and ever-changing economy; Students are provided the knowledge, tools, and resources to identify the skills that are needed to problem-solve, make connections, and reason. Furthermore, students go beyond content knowledge and technical skills to develop leadership skills and teamwork essentials through participation in the co-curricular student organization, SkillsUSA.

-Ability to Reach Mastery in Basic Maintenance and Repair Skills: Students who have completed all three years are qualified to take the end of pathway test. Students who pass this exam receive a cord for graduation and a student ASE certification. Students are given the opportunity to work at their own pace towards mastery of BMLR 1.

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I have read and understand the syllabus for the Automotive Shop and Classroom. I also understand the rules/classroom guidelines and expectations for the class.

Print student name

Student Signature

Date

Parent Signature

Date

REVIEW THE SYLLABUS AND GUIDELINES, SIGN AND RETURN TO THE INSTRUCTOR